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GEOPHYSICAL VARIABLES AND BEHAVIOR: IV. UFO REPORTS AND FORTEAN PHENOMENA: TEMPORAL CORRELATIONS IN THE CENTRAL U.S.A.

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Summary.—To test the general hypothesis that populations of Fortean events change qualitatively over time, temporal correlations between UFOs and several classes of Fortean events reported during a 20-yr. period (1949-1968) were completed for the central and eastern U.S.A. For the central U.S.A., numbers of UFO reports were significantly correlated with numbers of electromagnetic transients (power failures) (0.57) and odd human behaviors (0.62) of the previous year but with numbers of poltergeist-like (0.57) and odd fall reports (0.52) of the consequent two years. Only the latter correlations were evident for data in the eastern U.S.A. The analyses support the idea that as the geophysical source stimuli increase, Fortean events are first displayed as mundane electromagnetic episodes, then as frank UFO displays, and finally as more bizarre poltergeist-like reports.

The hypothesis that many UFO phenomena are actual luminous events generated by tectonic strain within the earth (Persinger, 1976) can be considered a special condition of a more general possibility. Recent conceptual developments[2] indicate that *qualitatively different* unusual events may be reported by human observers as the tectonic strain within an area increases. Many of these events have been called Fortean phenomena (Persinger & Lafrenière, 1977).

Briefly, the general theory predicts that as the strain intensity or the change in strain intensity increases, at least three distinct phases become evident. As the phenomena progress from Phase I to Phase III: (1) the area within which each display occurs decreases (however, many single displays may occur within a large region) and (2) the intensity and unusual nature of the events increase.

Phase I is associated with a statistical increase in the displays of mundane electromagnetic effects upon conducting materials (manifested as, for example, power failures, communication reception difficulties of a non-ionospheric origin, and small aircraft crashes due to transient EM field interference), and the human nervous system (incidences of temporal lobe-like behaviors, such as amnesia, disappearances, paranormal reports, running amok). As the tectonic strain increases, Phase I phenomena cease and are replaced by Phase II events, primarily UFO and luminous displays. If the strain continues to increase (no earthquakes), the more bizarre, highly localized and energetic Phase III events appear, e.g., poltergeist, falls of unusual objects, cascade.

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[2]M. A. Persinger, Prediction of UFO events and experiences, 1981. (Manuscript submitted for publication)

As a preliminary test of this sequence, the number of events per year between 1945 and 1970 for each of seven Fortean classes were obtained from the major source file (Persinger & Lafrenière, 1977) and checked by previous methods (Persinger, 1981b). Two separate sorts were completed for the central U.S.A. and the eastern U.S.A. (Persinger, 1981a). The seven classes of Fortean events were called FALLS (reports of rock, ice, etc., falls from unknown sources), conventional electromagnetic transients or CEMTs (primarily power failures or blackouts within major cities), HUMAN (cases of running amok, unusual deaths, etc.), TELE (reports of poltergeist-like events), UFORs (multiple luminous displays or UFO flaps), ABDUC (reports of contacts or abductions with "aliens"), ANIMA (reports of unusual or "nonexistent" animals).

The total numbers of events for each class in the central U.S.A. were: 178 UFORS, 31 FALLS, 34 HUMAN, 16 CEMT, 86 ANIMA, 25 ABDUC, 57 TELE. The total numbers of events for each class in the eastern U.S.A. were: 92 UFORs, 27 FALLS, 25 HUMAN, 10 CEMT, 17 ANIMA, 29 ABDUC, 55 TELE.

Two major limits of this procedure were recognized, overinclusion and sampling error. Adding multiple categories within each major class of Fortean events increased the number of cases per class; however, categories which do not share the same sources of variance may have been indiscriminately placed in the same cluster (the number of cases per category was too small for reliable analyses). Second, most of the data were collected from reports published in FATE magazine. Although sampling of a population is a legitimate approach, the control variables for selecting the numbers of reports to be published in FATE are not clear.

Using SPSS software (REGRESSION) and a DecSystem 2020 computer, correlation (r) matrices were obtained between UFORs (for the 20-yr. period between 1949-1968) and each of the other Fortean classes for ± 3 yr. (3 yr. before to 3 yr. after the key year; see Persinger, 1981b for procedure). The same operations were performed on the square root values for each variable since skewness values on some variables slightly exceeded 1.0.

The results for the central U.S.A. are shown in Table 1 (rs for the square root data, for comparison, are shown in parentheses). UFORs were most strongly but moderately correlated with CEMT and HUMAN event numbers during the previous year but with TELE and FALLS events of the consequent first and second years, respectively. ANIMA reports were not significantly correlated with UFORs at any time while ABDUC reports appeared marginally correlated with UFORs of the same year. Since all the significant correlations were positive, one might conclude that the years of maximum UFORs are preceded by increased CEMT and HUMAN events but followed by increased TELE and FALL events.

Stepwise multiple regression analyses of UFORs by the most optimal lag for TELE, CEMT, HUMAN, and FALLS did not produce values appreciably higher

TABLE 1

CORRELATION COEFFICIENTS BETWEEN UFORS AND NUMBERS OF EVENTS WITHIN VARIOUS FORTEAN CLASSES ±3 YEARS FOR THE CENTRAL U.S.A.

LAG	UFORs		
	FALLS	HUMAN	CEMT
−3	0.34	0.08	−0.07
−2	0.19	0.30	0.49
−1	−0.20	0.62* (0.60*†)	0.62* (0.69*†)
0	0.07	0.28	0.10
+1	0.33	−0.04	−0.20
+2	0.52* (0.42†)	−0.02	−0.22
+3	0.12	0.06	−0.21
LAG	ANIMA	ABDUC	TELE
−3	0.08	0.29	0.40
−2	−0.04	0.05	−0.01
−1	−0.13	−0.12	−0.30
0	−0.13	0.40	0.32
+1	−0.23	0.22	0.57* (0.52*†)
+2	0.20	0.08	0.28
+3	−0.09	0.05	−0.05

*$p < .05$, two-tailed. †Square-root transformed data.

than the largest bivariate correlation. Even though each variable was correlated > 0.50 with UFORs, multiple rs with all four variables in the equation did not exceed 0.70. Once the first variable entered, the remaining variables (intercorrelations: < 0.65) contributed little extra to the explained variance. That the four variables actually belong to the same source of variance (although separated in time) is an interpretation commensurate with the hypothesis.

The eastern sector of the U.S.A. did not demonstrate the same statistically significant pattern. Maximum but moderate correlations occurred between UFORs and FALLS (0.41), HUMAN (0.44), and TELE (0.40) for the following year interval. Again, ABDUC was correlated with UFORs (0.40) for the same year. Whether this pattern reflects true regional differences, the sample size, or a limit of the hypothesis is not clear at this time.

Investigations of the relationships between large scale geophysical stimuli and unusual phenomena are still experimental and conceptual frontiers. Many of these interactions may occur as very local and very transient clusters of unusual or Fortean events. One of these possibilities is the progressive and qualitative shift in the characteristics of these events over time.

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